REMARKS

Claims 1-20 are pending.

In the present Office Action, claims 1-20 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,366,617 (hereinafter "Ryan"). Applicant respectfully traverses these rejections and requests withdrawal of the rejections.

In order for there to be anticipation, each and every element of the claimed invention must be present in a single prior reference. Applicant respectfully submits that each of the claims 1-20 recite a number of elements which are neither taught nor suggested by Ryan.

By way of preface, Applicant notes that Ryan is generally directed to removing superfluous data from a received MPEG-2 bit stream. In contrast, Applicant's claimed invention concerns the repositioning of images in a video data stream. As will be seen from the following discussion, the cited reference and Applicant's claimed invention are not only directed to different purposes, but also have correspondingly different approaches.

As noted above, Ryan is directed to removing superfluous data from a received MPEG-2 bit stream. In particular, Ryan seeks to remove data which is not needed by a particular user in order to reduce memory accesses and processing which may be required by the decoder. One example of data which is deemed superfluous in Ryan is closed captioning data corresponding to a language different from that of the receiving user. For example, Ryan discloses:

> "The circuitry described above monitors an MPEG-2 bit-stream to selectively delete unneeded User Data from the bit-stream before the bit-stream is stored into the VBV buffer. If the unneeded User Data were not omitted, it would be fetched from the memory 120 by the microprocessor 130, shown in FIG. 1, and immediately discarded. Because it is discarded, the microprocessor will immediately need to

> fetch additional bit-stream data. The fetching of unneeded data uses valuable memory bandwidth which may be better used for other types of memory operations, especially in the decoding of a high definition (MP@HL) MPEG-2 encoded image data.
>
> The User Data transmitted with an MPEG-2 bit-stream may include information that is selectively used, responsive to viewer requests. For example, one type of data that may be transferred as User Data is multilingual close-caption information. In the exemplary embodiment of the invention shown in FIG. 1, the microprocessor 130 may be coupled to receive viewer commands from a remote control device (not shown). One of these viewer commands may produce a menu, using the OCD 171, that allows the user to select from among French, Spanish and Japanese close caption data. If, for example, the viewer selects Spanish close-caption data, and this data is transmitted in the User Data fields of Picture headers, the microprocessor 130 resets the Boolean signal Filter PICT Data so that the User Data for Picture records is passed to the VBV buffer where it may be processed into Spanish close-caption video overlays." (Ryan, col. 9, lines 13-41).

In order to achieve the above, Ryan discloses a parser which detects user data in a received MPEG-2 bit stream. Depending upon whether or not particular user data has been allowed for processing (e.g., a user's selection of a particular language in a television display menu), detected user data is either stored or discarded. For example, Ryan discloses:

> "FIG. 2 is a block diagram of circuitry suitable for use as the parser 116 shown in FIG. 1. In the circuitry shown in FIG. 2, the MPEG bit-stream is applied, 8-bits at a time, to a User Data start code detection engine 210 and to a 4-byte first in first out (FIFO) memory 216. The detection engine 210 is also coupled to receive a 4-bit value from a control register 212. This value is provided by the microprocessor 130 shown in FIG. 1. . . .
>
> Briefly, the User Data start code detection engine 210 includes a state machine which monitors the start code values occurring in the MPEG-2 bit-stream and changes state as different levels of the bit-stream are received. The detection engine 210 monitors start codes for the Sequence, Group of Pictures and Picture layers. It also monitors start codes for the beginning of a User Data entry in the data stream . . ..

> When a User Data entry is found in the bit-stream, the detection engine 210 compares the current state of the received bit-stream to values provided in the control register 212 to determine if the detected User Data should be passed to the VBV buffer or should be inhibited. If it is determined in the detection engine 210 that a particular User Data field should be inhibited, the appropriate filter signal: Filter Sequence Level, Filter Group Level or Filter Picture Level is asserted. These signals are applied to respective inverted input terminals of an AND gate 214 the output signal of which is applied to the enable input of a register 218.
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> The data input port of register 218 is coupled to receive the output signal provided by the 4 byte FIFO 216. In the exemplary embodiment of the invention, the 4 byte FIFO 216 operates to delay the bytes of the bit-stream while they are being processed by the User Data start code detection engine 210. The User Data start code detection engine 210, 4 byte FIFO 216 and register 218 are synchronized through the signal CLK applied to the their respective clock input terminals. The output signal of the register 218 is the output signal of the parser 116 shown in FIG. 1. This signal is applied to the memory 120 via the RAC interface 170. As described above, data provided by the parser 116 is stored into the VBV buffer of the bit-stream decoder." (Ryan, col. 4, line 34 – col. 5, line 9).

In contrast to Ryan, Applicant's claimed invention is not directed to discarding superfluous data. Rather, the claimed invention is generally directed to determining whether the repositioning of an image will cause a change in bit positions of the image data. If it is determined such bit positions will be changed, stuffing bits may be used to restore the original bit positions. Accordingly, bit shifting may not be required. Applicant notes the Ryan does not disclose anything concerning these and other recited features of the claims. For example, claim 1 recites a method for repositioning images in a video data stream which includes:

> "storing encoded video data in a first buffer, said data including the representation of a first image at a first position in a displayed image;
>
> determining whether repositioning of the first image to a second position in the displayed image would result in a change of bit positions of the encoded first image data, said bit positions being determined with respect to a first number of bits." (emphasis added).

Applicant submits Ryan neither teaches nor suggests at least the above highlighted features. In the present Office Action, it is suggested that Ryan teaches the above highlighted features in the following cited excerpt:

> "The decoded image data produced by the motion compensation processor 161 is stored into buffer memories 162 and 164. From the buffer memories 162 and 164 the decoded image data is stored into the memory 120 for display or for use as reference frame data in decoding motion compensated encoded data from later received image fields or frames. Data to be displayed is stored into the memory 120 in block format and transferred, in raster-scan format, to a memory 174, for example, to be provided to a display device (not shown) under control of a display processor 175." (Ryan, col. 3, lines 35-45).

The above cited portion of Ryan merely describes storing image data into buffers and memory. The data stored in memory may be displayed or serve as a reference frame. However, there is no teaching or suggestion of the above highlighted features. Storing an image which may serve as a reference frame for motion compensated data is not equivalent to the above features. Further, Ryan does not teach or suggest anything concerning whether "bit positions" may be changed as the result of repositioning an image. Accordingly, Ryan nowhere discloses the above highlighted features.

Further, Ryan nowhere teaches or suggests the features of claim 1 wherein it recites:

> "modifying said video data by generating one or more stuffing bits configured to restore said encoded first image data to said bit positions, in response to determining said repositioning would result in said change of bits positions."

In the Office Action it is suggested that these features are disclosed by Ryan in the following excerpt:

> "Among the parameters that may be provided are quantization matrixes which define how the coefficients in the individual blocks were

> quantized during the encoding process. As described above, the stuffing entry 310 in the Sequence syntax shown in FIG. 3A, represents a zero fill operation which may be performed to conform the timing of the bit- stream to the display of the video image." (Ryan, col. 5, lines 60-67).

However, the above disclosure of Ryan merely describes a stuffing entry may be included in a MPEG-2 bit stream during the encoding process. The above disclosure of Ryan is completely unrelated to the repositioning of an image as recited. Further, Ryan says nothing of restoring an encoded image to bit positions in response to said determining as recited. Accordingly, the above features of claim 1 are wholly absent from the cited art.

In view of the above discussion, Applicant submits claim 1 is not anticipated by the cited art for at least the above reasons. Therefore, claim 1 is patentably distinguishable from the cited art. As each of independent claims 9 and 18 include similar features to that of claim 1, each of claims 9 and 18 are believed patentable for similar reasons.

In addition to the above, additional features are recited in the dependent claims which are wholly absent from the cited art. For example, claim 5 a number of features which are neither taught nor suggested by Ryan. The present Office Action cites the features of claim 5 as being taught by the following portions of Ryan:

> "As described above, the MPEG-2 standard defines 5 layers of information for a sequence of images. These are the Sequence layer, the Group of Pictures layer, the Picture layer, the Slice layer and the Macroblock layer. FIGS. 3A through 3C are syntax diagrams which illustrate the structure of the Sequence, Group of Picture and Picture layers, the layers which may contain a User Data entry. FIG. 3D is a syntax diagram which illustrates the structure of the Extension and User Data field of any of these layers." (Ryan, col. 5, lines 25-32).
>
> "FIG. 3D is a syntax diagram of the Extension Data and User Data fields 338, 352 and 362. The Extension and User Data fields begin with optional stuffing data 372, as described above. The next entry is an optional Extension Data record which includes an Extension Start Code

> 374 and one or more bytes of Extension data. The length of the Extension data field is not limited. The field ends when the next start code is encountered. If User Data is present in the record, this next start code is the User Data Start Code 378, otherwise it is the start code of the next record." (Ryan, col. 7, lines 43-53).

However, the above disclosure or Ryan merely provides a general description of the structure and syntax of the MPEG-2 standard. The first excerpt above simply mentions the slice layer as being part of the structure. The second excerpt simply states the length of the extension data field is not limited. Nothing in the above is directed to generating empty slices as recited. In addition, as can be seen from the above excerpts, claim 5 includes numerous features which are nowhere disclosed by Ryan.

Still further, the present Office Action similarly cites the above two excerpts as teaching the features of claim 6. More particularly, the Office Action on page 3 suggests the features of claims "5-8" are taught by the cited portions of Ryan. However, the Office Action then nowhere mentions the majority of the features of claims 5-8. Applicant is at a loss to see anything in Ryan which remotely resembles or suggests the features of claims 6-8. If in fact the examiner considers Ryan to be pertinent to these claims, such pertinence must be clearly explained, 37 CFR 1.104(c)(2).

While Applicant could discuss additional features of the claims which are wholly absent from the cited art, Applicant believes the above discussion adequately serves to overcome the rejections and warrant withdrawal of all rejections.

Applicant submits the application is now in condition for allowance. Should the examiner believe any issues remain which would prevent the present application from being allowed, the below signed representative requests a telephone call at (512) 853-8866 in order to facilitate a speedy resolution.

CONCLUSION

Applicant submits the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time are necessary to prevent the above referenced application from becoming abandoned, Applicant hereby petitions for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5266-07201/RDR.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

Respectfully submitted,

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